

PPL13 PROJECT NOMINEE FACT SHEET

March 12, 2003

Project Name and Number

Rockefeller Gulf of Mexico Shoreline Stabilization, Joseph's Harbor east.

Coast 2050 Strategy

Regional: Dedicated dredging or beneficial use of sediment for wetland creation or protection (6) and Stabilize Gulf of Mexico Shoreline from Old Mermentau River to Dewitt Canal (16). Coast-wide Common: Maintenance of Gulf, Bay and Lake shoreline Integrity, and Maintain, Protect or Restore Ridge Functions.

Project Location

Region 4, Mermentau Basin, Cameron/Vermilion Parish, LA. Along the Gulf shoreline from eastern bank of Joseph's Harbor (Rockefeller Refuge) east to Little Constance Bayou.

Problem

The project will be designed to address Gulf shoreline retreat averaging 35' per year (Byrnes, McBride et al., 1995) with subsequent direct loss of saline emergent marsh.

Goals

1) Reduce Gulf shoreline retreat from Joseph's Harbor to Little Constance Bayou, 2) protect saline marsh habitat, 3) Enhance fish and wildlife habitat.

Proposed Solution

The project would entail construction of a near-shore break-waters along the Gulf of Mexico shoreline. The break-water would extend from the eastern bank of Joseph's Harbor canal eastward for 25,000 feet. The proposed structure would be tied into the present shoreline at the point of beginning and ending. It would be designed to attenuate shoreline retreat along this stretch of Gulf shoreline, as well as promote shallowing, settling out, and natural vegetative colonization of over-wash material landward of the proposed structure. The resultant design would be placed offshore along the -5' contour. The crest height of the proposed structure would be 6 feet above the Gulf floor, with a 20 foot crown and 1:3 slope on both sides. The proposed structure would consist of 2200 lb. class stone. The proposed design would include openings every 1000' to facilitate material and organism linkages. Any excavation material for construction access would be placed on the landward side of the structures.

Preliminary Project Benefits

This project is anticipated to benefit 300 acres (25K ln ft X 35 ft/yr X 20 yrs X 0.75). The loss rate reduction throughout the area of direct benefits over the project life is projected to be >75%.

Compatibility with Coast 2050 Criteria

Wetland Elevation/Sustainability

The project will maintain the shoreline integrity and provide protection from northwesterly winds that have a predominant impact to the shoreline during cold front passage, and marshes in Unit 5 from Gulf of Mexico intrusion. Over a 20-year project life, the project would protect approximately 400 acres of marsh from shoreline erosion using an average area of 35 ft/year. Additionally, 110 acres of marsh elevations would be created from beneficial use placement of dredged material.

Ecosystem Influence Area

The project is expected to influence 510 acres directly (400 protected, 110 created), and 4,900 acres indirectly (Rockefeller Refuge Unit 5).

Structural Framework

Through the maintenance of the Gulf of Mexico beach rim, the project is expected to benefit greater than 75% of the ecosystem influence area for over 20 years.

Infrastructure

The project would have no impact on critical or non-critical infrastructure.

Organism and Material Linkages

The proposed design would include openings every 1000' to facilitate material and organism linkages consistent with the sustainability of the ecosystem, but has a moderately less than natural level of exchange.

Coast 2050 Habitat Objectives

The Chabreck '88 maps classifies this area as brackish (interior) with saline marshes along the beach rim. The objective of this project is to maintain 100% of the ecosystem influence area (i.e., Rockefeller Unit 5) as brackish habitat and an intact beach rim as barrier island/chenier shoreline habitat.

Project Synergy

This project provides a high degree of synergy with PPL 10 Rockefeller Shoreline Project in protecting critical habitat and ridge (chenier) function.

Preliminary Construction Costs

\$16,625,000 (construction + 25% contingency)

Preparer of Fact Sheet

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